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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,837	10/20/2003	Kenshou Miyatake	010482.52834US	2005

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EXAMINER

GOMA, TAWFIK A

ART UNIT PAPER NUMBER

2627

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/687,837	Applicant(s) MIYATAKE, KENSHOU	
	Examiner Tawfik Goma	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the amendment filed on 9/20/2006.

Claim Objections

Claim 4 is objected to because of the following informalities: Claim 4 is currently dependant on canceled claim 1, and should be dependant on claim 3 instead.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al (US 5526336) in view of Takeda et al (5648950).

Regarding claim 3, Park discloses an optical pickup device for writing data or reading data recorded on an optical disk (fig. 8), said optical pickup device comprising: a laser light source for emitting a laser beam for writing data or reading data (1A, 1B, fig 8); photodetectors having light-receiving portions for respectively receiving the laser beam reflected by the recording surfaces of a plurality of layers of the optical disk (11A, 11B, fig. 8); and an optical system for guiding to the optical disk the laser beam emitted from the laser light source (22, 23, 4, 5, fig. 8) and guiding to the photodetectors the laser beam reflected by the optical disk (23, fig. 8 and 21, fig. 7); said optical system having: an object lens for condensing the laser beam (5, fig. 8) onto the optical disk,

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having a curvature or refractive index that varies by steps in the radial direction (5, fig. 8), and comprising a multifocal lens for focusing on a plurality of recording surfaces of the optical disk (4, 5, fig. 8) and a collimator lens (2, fig. 7) for converting transmitted light to parallel light. Park further discloses wherein the object lens condenses the laser beam emitted from one laser light source onto the recording surfaces of the multiple layers of the optical disk (7, 8, fig. 8), so as to simultaneously read or write data to the recording surfaces of the layers (col. 5 lines 33-44). Park fails to disclose wherein the optical system includes a half mirror for reflecting or transmitting a laser beam emitted from the laser light source, and transmitting or reflecting the light reflected from the optical disk and a diffraction grating for diffracting a part of the laser beam transmitted through the half mirror and guiding the laser beam to at least one of the light-receiving portions; a collimator lens for converting the light transmitted or reflected into parallel light. In the same field of endeavor, Takeda discloses a rising mirror (13, fig. 15), a diffraction grating (12, 17, fig. 15) for guiding light transmitted through a half mirror (13, fig. 16) to different light receiving portions of a photo-detector (fig. 16 and fig. 17). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the optical system disclosed by Park with the features disclosed by Takeda. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to use a rising mirror and a diffraction grating for directing light to different parts of a photodetector in order to properly detect light that has different polarization used during recording and to reduce the size of the optical system used by Park (see Takeda col. 2 lines 66-67 thru col. 3 lines 1-2).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al (US 5526336) in view of Takeda (US 5648950) and further in view of Hayata (JP 10302403 A).

Regarding claim 4, Park in view of Takeda disclose everything claimed as applied above (see claim 3). Park discloses simultaneous playback of the recording layers (col. 5 lines 33-3) but fails to disclose storage means for saving the data of the another of the recording surfaces. In the same field of endeavor, Hayata discloses simultaneously reading data from different layers of a DVD and storage means for storing the read out by the reading means (see abstract, and 13a, 13b fig. 1). It would have been obvious to one of ordinary skill in the art to modify the device disclosed by Park in view of Takeda by providing storage means for storing the data of the other recording layer. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to provide storage means in order to compound data from different recording layers during reproduction (see Hayata par. 18)

Claim 5 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Park et al (US 5526336) in view of Takeda et al (5648950), as applied to claim 3 above, and further in view of Nakamural et al (US 2003/0048737).

Regarding claim 5, Park in view of Takeda disclose everything claimed as applied above (see claim 3). Park in view of Takeda fail to disclose wherein the collimator lens is disposed between the half mirror and the optical disk and the objective lens is between the collimator lens and the optical disk. In the same field of endeavor,

Nakamura discloses a collimator lens between a half mirror and an objective lens and the objective lens between the collimator lens and the disk (13, fig. 1). It would have been obvious to one of ordinary skill in the art to modify the system disclosed by Park in view of Takeda by providing the collimator lens on the other side of the half mirror. The rationale is as follows: One of ordinary skill in the art would have been motivated to provide the collimator lens between the half mirror and the objective lens in order to collimate both the emitted light from the laser as well as the return light reflected by the disk (fig. 1 of Nakamura).

Response to Arguments

Applicant's arguments filed 9/20/2006 have been fully considered but they are not persuasive. Regarding applicant's argument that the reference uses a Fresnel lens which the applicant does not require, this argument is not persuasive because the claim has "comprising" language. The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See e.g. *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) ("Comprising" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.)

Regarding applicant's argument that the reference fails to show that the collimator lens converts a laser beam reflected or transmitted by a half mirror into parallel light, the argument is not persuasive because Park discloses a collimator lens

(2, fig. 7) that by definition converts light into parallel light. The parallel light is then reflected by a beam splitter or mirror onto the disc. Takeda is relied upon for the mirror being a half mirror, and the arrangement of the elements in the combination is discussed in response to applicant's arguments below.

Regarding applicant's argument that the Takeda reference fails to disclose a collimator lens and an object lens, these arguments are not persuasive for at least the reason that Takeda is not relied upon to disclose these elements. The collimator lens and the object lens are disclosed by Park. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Takeda discloses that an object of providing the mirror and the diffraction grating in his invention is to reduce the number of parts and to save cost and increase production rate (col. 2 lines 65-67 thru col. 3 lines 1-2).

In response to applicant's arguments that the examiner has not established why or how a skilled artisan would have combined the Park and Takeda references, this reference is not persuasive. The examiner has already established why a skilled artisan would have combined the references by providing the motivation to reduce the number of parts as discussed above. The question as to how the references would be combined will now be discussed. Applicant acknowledges that Park's system routes light using beam splitters. Park discloses two beam splitters (3, 21, fig. 7) wherein one beam splitter is used to direct emitted light towards a disc and to transmit reflected light (3, fig. 7) and the other beam splitter is used to direct light polarized in a first direction to a first photodetector (11A, fig. 7) and light polarized in a second direction perpendicular to the first direction to a second photodetector (11B, fig. 7). Takeda discloses a diffraction grating that is part of a rising mirror (13, fig. 16) which directs light polarized in a first direction to a first set of detection units (32, 33, figs. 17, 18) and light polarized perpendicular to the first light to second detection units (31, figs 17, 18). Takeda discloses that this system reduces the number of parts by incorporating the diffracting element and that the beam splitting elements used in the prior art (fig. 22). The rising mirror/diffraction grating element in figure 16 would be incorporated to the park reference to replace the separate beam splitter units (3, 21). With the element disclosed by Takeda, the laser light would pass through this sequence of elements: Collimator lens (2, fig. 7 of Park), Rising mirror/diffraction grating (fig. 16 of Takeda), Object Lens (5, fig. 7 of Park), Back through Object lens, Diffracted by grating of Takeda

to be directed to photodetectors 11A, 11B of Park. With such an arrangement, a reasonable expectation of success can be achieved.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion


THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tawfik Goma whose telephone number is (571) 272-4206. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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11/29/2006



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